

*Height of Cotton plants and length of fibre.* Working with the Pima variety of American Egyptian cotton, determinations were made of the length of fibre from bolls borne on fruiting branches at successive groups of nodes on the main stalk. The length of fibre was found to increase steadily from the lower to the next higher group of fruiting branches. On the other hand, no close correlation was found to exist between the length of fibre in a boll and date of anthesis of the flower from which the boll had developed—T. H. Kearney and Harrison in Journal of Agricultural Research.

G. N. R.

*Freeing Animals from Ticks.* Di Sangiustino, I describes a simple, cheap and speedy method adopted by the Arabs to free an animal from ticks. For 5 consecutive days, they give the tick-infested cattle pills made of barley pounded in a mortar, kitchen salt being added in the proportion of 200 grams per 2 Kilograms barley. The animals readily take the salted barley. In the treatment for adult cattle (1 Kg) 200 gm. per day are necessary, while 500 gm. (100 gm. per day) are enough for calves. From the first day, the dead or dying ticks begin to fall off, and on the fifth day the animal is quite free from the parasites. The sodium chloride is directly absorbed and passes into the blood, and poisons the ticks as they suck the blood.

(Inter. Rev. of the Sc. and Prac. of Agri. New series Vol, II. No. 4 October to Dec. 1924 p. 931-932).

B. V. N.

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## REVIEW.

Lt. Col. W. C. Ross and Dr. K. N. Bagchi of Bihar and Orissa in an article in recent number of the Journal of Indian Medical Research estimate that as a result of their observations at Patna in 1921 8.76 lbs. of nitric acid equivalent to 1.95 lbs. of nitrogen per acre is annually added to the soil. This figure appears to be too low. Dr. Leather investigated this problem as early as 1906 and as a result of 2 years' observations at Dehra Dun and Cawnpore estimated that about 3.5 lbs. of nitrogen are annually added to the soil. The disparity in the two figures is apparently due to the fact that Messrs. Ross and Bagchi based their estimate on the nitrogen present as nitrates only; while Dr. Leather estimated the ammoniacal nitrogen as well,

The recent investigation is of interest because it seeks to explain the causes for the variation in the reaction of the waters of the Ganges and the Sone.

Messrs. Ross and Bagchi started an investigation in 1917 on the relationship between the reaction of the waters and the use of alum preparations in their sedimentation. They have found that the waters of these rivers were alkaline in reaction for 6 to 8 months between October and May and acid in reaction for 4 to 6 months between May and October. These results were quite unexpected and on further investigation they found that the calcium bicarbonate present in the river waters was converted into calcium nitrate. The liberation of free carbonic acid gas by nitric acid in the rain has been stated to be the reason for the acid reaction,

B. V. N.

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### Think on these things in 1925.

*Benjamin Franklin in the Eighteenth Century said:—*The Taxes are indeed very heavy, and if those laid on by the Government were the only ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous to some of us. We are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our Folly: and from these Taxes the Commissioners cannot ease or deliver us by allowing an Abatement. However let us hearken to good Advice, and something may be done for us; God helps them that helps themselves, as Poor Richard says in his Alamanack of 1733.

Sloth, like rust, consumes faster than Labour wears; while the used Key is always bright. But dost thou love life, then do not equander Time, for that's the stuff Life is made of.

The Sleeping Fox catches no Poultry. There will be sleeping enough in the Grave.

If Time be of all Things the most precious, wasting Time must be the greatest Prodigality; Lost time is never found again, and what we call Time enough, always proves little enough. Sloth makes all Things difficult, but Industry all easy, and He that riseth late must trot all Day, and shall scarce overtake his business at night; while Laziness travels so slowly, that Poverty soon overtakes him, Drive thy Business, let not that drive thee; and Early to Bed and early to rise makes a man healthy, wealthy and wise. Industry need not wish,

and he that lives upon Hope will die fasting. There are no Gains without pains; then Help Hands, for I have no Lands. At the working Man's House Hunger looks in, but dares not enter. Industry pays Debts, while Despair increaseth them. A Legacy, Diligence is the Mother of Good-luck. God gives all Things to Industry. Then plough deep, while Sluggards sleep, and you shall have Corn to sell and to keep. One To-day is worth two To-morrows. Have you somewhat to do To-morrow, do it To-day. Be ashamed to catch yourself idle.

*Theodore Roosevelt in the Twentieth Century Said.* I extend pity to no man because he has to work. If he is worth his salt he will work. I envy the man who has a work worth doing and does it well. There never has been devised, and there never will be devised, any law which will enable a man to succeed save by the exercise of those qualities which have always been the prerequisites of success, the qualities of hard work, of keen intelligence, of unflinching will.

(The Philippine Agriculturist, Vol. XIII, No. 8, January 1925).

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## UNIVERSITY OF MADRAS.

### B. Sc. Ag. Degree Examination, 1925.

#### PART I

#### AGRICULTURAL ENGINEERING

TUESDAY, 24TH MARCH. 7-10 A. M.

[NOTE.—THREE questions are to be answered in A and THREE questions in B. Questions 3 and 6 are compulsory].

#### A

1. A heap of earth is stacked for measurement with a trapezoidal section. The bottom of the heap is a rectangle, 25 feet by 10 feet. The slope on the four sides is 1 to 1. The depth is uniformly 3 feet. Calculate the volume.

2. (a) State what you understand by the theorem known as the 'triangle of forces'.